Meeting Shared Health Information Needs
Planning and Building the Local Health Information Infrastructure
DRAFT – 02/10/06

Most community health information infrastructure (HII) efforts around the country today have as their objective the development of very robust and comprehensive solutions. The accepted premise is that the current state of the HII is woefully inadequate and the emergence of a system that provides virtually all information to any party at any time is the ideal to which we should strive. The two models most commonly suggested are 1) a decentralized, fully interoperable network of electronic medical records (EMR) supported by a common master person index (MPI), and 2) a network of EMRs feeding a central repository and supported by a common MPI. Both models assume significant levels of new capability at both the enterprise and community levels. Both models also assume that the costs of the development and operation will be more than matched by the benefits received. The type of architecture proposed in the straw man fits model (2). The straw man envisions a very rich set of data/secure communication capabilities.

I have a somewhat contrary view of how best to address community HII. I believe:

- The "woeful inadequacies" of the current HII and the benefits/ROI for the envisioned comprehensive HII are overstated.
- The debate between central repository and distributed interoperable system is a false choice. Neither model is feasible in the short term or necessarily desirable.
- The focus on developing a longer term, very robust "idealized" architecture is the wrong direction for the community HII conversation to take.

Instead of conceptualizing the grandest system and assuming the benefits justify the cost. I believe we should do the exact opposite. I think the guiding principle should be that the *shared or common HII should be as small and modest as possible.* Every proposed investment should be rigorously tested to determine whether the added functionality presents a clear business case *to the parties who will be called upon to invest.* Right or wrong, it is the decisions of the parties who are prepared to invest that will ultimately matter. Everyone else is just offering an opinion.

My recommendation is driven by three basic assumptions I have come to hold dear after spending 15 years in the community health information movement:

1. Despite all the local and national hoopla there is a very limited amount of mindshare and budget that will ultimately be devoted to HII and even less to the shared HII. Deciding where to focus this very limited money/attention is critical. I believe energy focused on longer term idealized plans will detract from our ability to deliver pragmatic solutions in the near term. Over the past 15 years there have been a number of shared HII efforts in Washington State and elsewhere. Grossly generalizing, those efforts that focused on high level, long term, idealized solutions consumed lots of time and money and generated little of substance. Those initiatives that focused on meeting short term business or clinical needs generated much more real capability on the ground. There is great potential to waste lots of time and energy in theoretical debates that don't move us any closer to deploying solutions. Furthermore, the potential exists to repeat the mistakes of the mid-90s and "poison the well." Not only will we not deploy solutions, we will engender enough cynicism to forestall any future constructive conversation. The HSIS debacle set back community planning efforts in WA for years. Early and visible wins are the key to success for any collaborative process, public or private sector.

2. I think it is always a mistake to lead with technology. The driver should be the business and clinical requirements, not a technology architecture. Inevitably, the market must drive the plan, not the other way around. Locking into to a technology solution makes it much more likely the market will pass the plan by. I have serious doubts about the ROI claimed for the comprehensive HII solutions. Most of the major problems that afflict our health care system are not caused by a lack of technology and they will not be fixed by deploying HII. The first task should always be to prioritize the business requirements. Some of the specific business questions I would ask include:
    a. How much of the value of the proposed HII can be achieved by just exchanging medication information? What if you add labs? What if you add a problem list? Can a few dollars spent linking and leveraging existing HII investments and data sets derive much of the same community value at a fraction of the cost of the more comprehensive EMR based model? Is the marginal benefit of exchanging all the contents in an EMR really worth the marginal cost?
    b. Of the benefits derived from the HII, what % will accrue from a small subset of the patient population vs. the whole population? Is it 80/20? If so, where's the shared value in exchanging data on everyone or even most people?
    c. How much of the care delivered that we need to exchange information about is local? How much value will be generated by building the capability to ship data from Spokane to Bellingham to Seattle, etc.?
    d. If you could aggregate all the data proposed for analytical purposes in the central repository would you have the talent/budget to process and share it? How actionable will the findings be? Will the environment in the larger system support changes dictated by the findings? Are there a very small number of specific targets we could better focus on?
    e. If the goal is a consumer centric system, how much value will consumers derive from accessing an EMR designed for providers vs. a PHR designed for consumers? Considering the vast differences in cost for the two approaches, what is the consumer ROI for PHR vs. EMR?
    f. If you had dollar to spend on health care how much would you put into HII? If you had a dollar to spend on HII how much would you spend on full EMR interoperability? If you had a dollar to spend on using HII to manage care how much would you spend on the non-chronically ill? If you had a dollar to spend on HII in Spokane, how much would you spend to enhance connectivity with Seattle vs. others in the Spokane community?

3. Most of the HII in place today is the result of enterprise investments, not community investments. This leads to three conclusions 1) most of the HII in the future will continue to be built and paid for by enterprises, 2) most enterprises can and will take care of themselves 3) common HII must be kept to the absolute bare minimum because it is incredibly difficult to capitalize and support. It is common in the course of the current HII conversation to intermix enterprise HII with shared or common HII. I believe this is a serious mistake, particularly for planning purposes. I think it is very unlikely the community will have to/be allowed to finance, govern, direct or control most enterprise HII. I believe the community HII effort is best focused in four areas:
    - Nudge, link, leverage and support enterprise HII with limited shared infrastructure
    - Assist those providers and consumers who lack the means to deploy/access HII
    - Promote and support enterprise and community HII to the good of all

- Identify regulatory or legislative solutions that accelerate the growth of HII and protect the interests of vulnerable parties

In conclusion I would ask whether the common good is best served by focusing on long term conceptual ideas or specific short term projects. What if the focus of the community conversation was shifted to prioritize the one, three or five things we all agree we can and should do now, and how best to do it? Such initiatives create a foundation to support future work, establish concrete symbols of success and generate a valuable knowledge base to support more informed long term planning. I believe this approach offers the highest probability of success even if the ultimate goal is a more comprehensive long term vision. To the degree the fully interoperable, EMR based HII does prove to be the right direction for the community, I suspect working from the bottom up, growing the HII if and when the business case proves out and adapting technology to changes in the market will offer a much higher probability of success than the top down model.